

FIG. 1

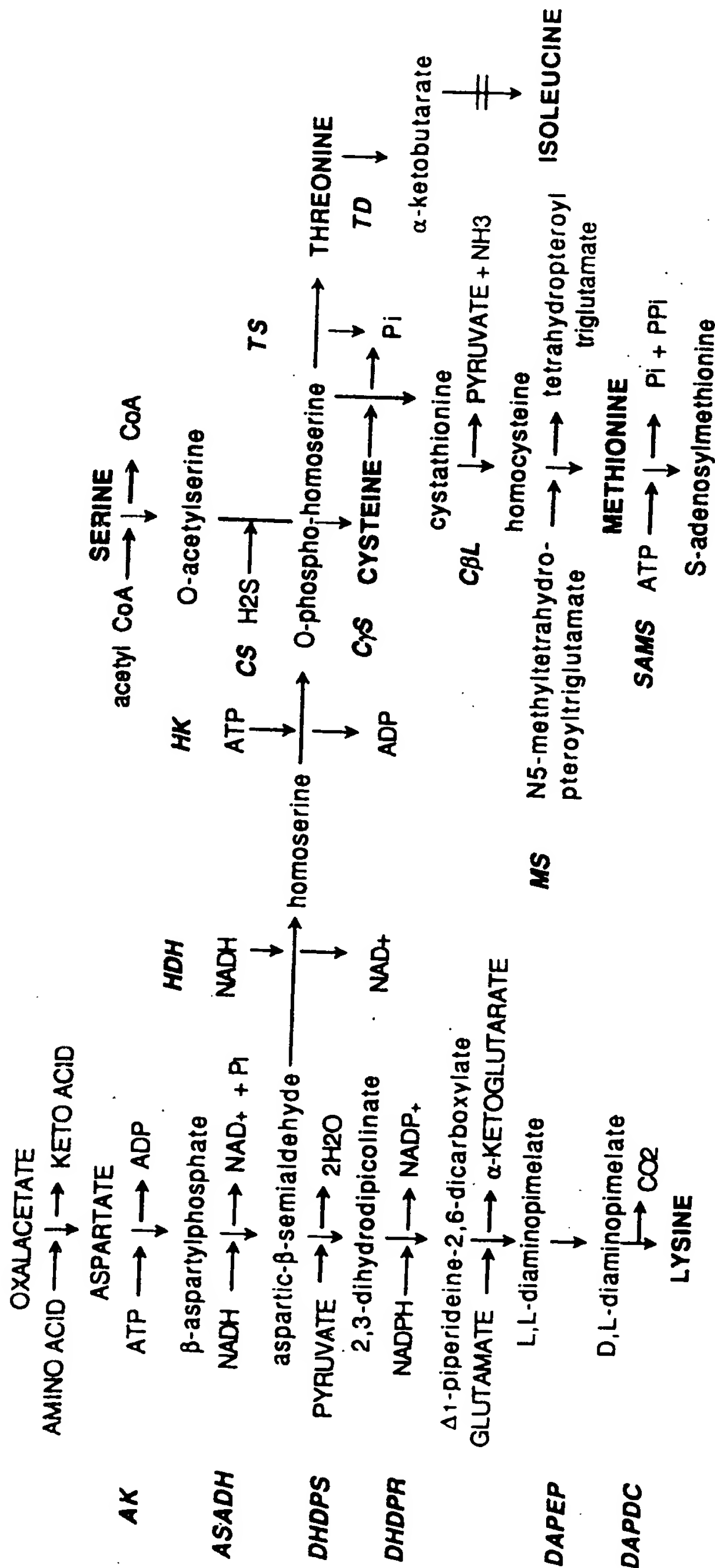


Figure 2A

SEQ	ID	NO:	7	MS	-----RHL-----	*****+	*
SEQ	ID	NO:	52	MG	-----Y-----	-----NVAIVGATGAVGETFLTV	
SEQ	ID	NO:	43		-----	-----RVAIVGATGEVGRITFLKV	
SEQ	ID	NO:	2		-----	-----	
SEQ	ID	NO:	45		-----	-----	
SEQ	ID	NO:	6		MQAAAAVHRPHLLGAYPGGRARRPST--	-----VRMALREDGPSVAIVGATGAVGQEFRLV	
SEQ	ID	NO:	49		-MASLSVLRHNHLFSG-PLPARPKPTSSSSSRIRMSLRENGPSIAVVGTGAVGQEFRLSV		
SEQ	ID	NO:	47		-MASLSVLRHNHLFSG-PLPARPKPTSSSSSRIRMSLRENGPSIAVVGTGAVGQEFRLSV		
SEQ	ID	NO:	4		ARASLSVLRHNHLFSG-PLPARPKPTSSSSSRIRMSLRENGPSIAVVGTGAVGQEFRLSV		
SEQ	ID	NO:	51		-----	-----	
					MQAAAA-VHRPHLLAASPLGGRASRRPST--	-----VRMALREDGPSVAIVGATGAVGQEFRLV	

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SEQ	ID	NO:	7		*****	*
SEQ	ID	NO:	52		LEERNFPIKSLYPLASSRSVGKTVTFRDQELDVLDLA-EFDFSKVDLALFSAGGAVSKEY	
SEQ	ID	NO:	43		LEERNFPVDLVLASERSEGVLTFFKGKEYTVKALNKENSFKGIDIALFSAGGSTSKEW	
SEQ	ID	NO:	2		-----AVQDLAAPGAFDGVDIALFSAGGSVSRKY	
SEQ	ID	NO:	45		-----	
SEQ	ID	NO:	6		ISSRGFPYRSLRLLASERSAGKRLPFEGQYTVQDLAAPGAFDGVDIALFSAGGVSRAH	
SEQ	ID	NO:	49		LSDRDFPYRSIHLASKRSAGRRIITFED-----	
SEQ	ID	NO:	47		LSDRDFPYRSIHLASKRSAGRRIITFEDRDYVVQELT-PESFDGVDIALFSAGGISKHF	
SEQ	ID	NO:	4		-----	
SEQ	ID	NO:	51		ITARDFPYRSLRLLASERSAGKRIDFEGRDYTVQDLAAPGAFDGVDIALFSAGGISRAH	

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Figure 2B

SEQ ID NO: 7	APKAVAAGCVVDNTSCFRYEDDIPLVPGSESSNRDYT---	KRGIIANPNCSTIQMV
SEQ ID NO: 52	APKFAKDGVVVIDNSSAWRMDPDVPLVPEVNPEDVKDFK---	KKGIIANPNCSTIQMV
SEQ ID NO: 43	GPAAVASGAVVDNSSAFRMEPEVPLVIPVNPEAMANVRLG--	QGAIVANPNCSTIIICL
SEQ ID NO: 2	-----	-----
SEQ ID NO: 45	APAAVASGAVVDNSSAFRMDPEVPLVIPVNPEAMAHVRLG--	KGAIVANPNCSTIIICL
SEQ ID NO: 6	-----	-----
SEQ ID NO: 49	GPIAVNRGTVDNSSAFRMDPEVPLVIPVNPEAMQNIKAGTGKALIANPNCSTIRCL	
SEQ ID NO: 47	GPIAVNRGTVDNSSAFRMDPEVPLVIPVNPEAMQNIKAGTGKALIANPNCSTIIICL	
SEQ ID NO: 4	-----	-----
SEQ ID NO: 51	APAAVASGAVVDNSSAYRMDPDVPLVIPVNPEAMADVRLG--	KGAIVANPNCSTIIICL

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SEQ ID NO: 7	VALKPIYDAVGISRINVAITYQSVSGTGKKAISELVAQVGDLLNGRP-ANVQVYPQQIAFN
SEQ ID NO: 52	VALKPIYDKAGIKRVVSTYQAVSGAGAKAIEDLKNQTKAWCEGKEMPKAQKFPHQIAFN
SEQ ID NO: 43	MAATPLHRHAKVLRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKA-PTCNIFKQQYAFN
SEQ ID NO: 2	-----WYRHAQVVRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKA-PTCNIFKQQYAFN
SEQ ID NO: 45	MAATPLHRHAKVVRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKA-PTCNIFKQQYAFN
SEQ ID NO: 6	MAVTPLHRHAKVVRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKA-PTCNIFKQQYAFN
SEQ ID NO: 49	KAATPLHRRRAKVLRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKP-PTCKIFNRQYAFN
SEQ ID NO: 47	MAATPLHRRRAKVLRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKP-PTCKIFNRQYAFN
SEQ ID NO: 4	-----
SEQ ID NO: 51	MAVTPLHRHAKVVRMVVSTYQAASGAGAAAMEELKLQEQEVLEGKP-PTCNIFKQQYAFN

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Figure 2D

SEQ ID NO: 7	VADNIRKGAATNAVQIAEILQREFLLKLSLPQ	++*+*****+**	*****+	*
SEQ ID NO: 52	VADNIRKGAATNAVQIAELLVKEGLI-----			
SEQ ID NO: 43	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 2	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 45	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 6	-----			
SEQ ID NO: 49	CGDQIRKGAALNAIQIAEML-----L--			
SEQ ID NO: 47	CGDQIRKGAALNAIQIAEML-----L--			
SEQ ID NO: 4	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 51	CGDQIRKGAALNAVQIAEML-----LK-			

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Figure 3A

SEQ ID NO: 20	MD-----TFSYRDAE-----
SEQ ID NO: 57	MGQTNSETQQARLYTONSQKQLLRSLFLLHLIFGYQSHKTLRMAAATQFLSQPSSLNPHQ
SEQ ID NO: 9	-----
SEQ ID NO: 11	M-----AAANLLRSLL-----PTPNTIRTSHPTPRSPAV-----
SEQ ID NO: 13	L-----H-----
SEQ ID NO: 15	-----
SEQ ID NO: 19	-----
SEQ ID NO: 54	C-----NTHCLVGKIFH-----QQHTAMAGSNILSHSPSLPKTYSHS
SEQ ID NO: 17	-----
SEQ ID NO: 56	-----

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SEQ ID NO: 20	-----	+++	**	++
SEQ ID NO: 57	LKNQTSQRSRIPVLSLKSTLPLKRLSV--KAAVVSQNSSKTVTKFDHCFKKSSDGFLY	-----	-----	-----LF
SEQ ID NO: 9	-----	-----	-----	-----
SEQ ID NO: 11	-----VSFPRRRARLSVCASVMSPPPPQAAAGVPKHCFRRGADGYLY	-----	-----	-----
SEQ ID NO: 13	-----	-----	-----	-----
SEQ ID NO: 15	-----	-----	-----	-----
SEQ ID NO: 19	-----	-----	-----	-----
SEQ ID NO: 54	LNQNALSQKLFFLPLKFKAATKPRALRAVLSQLNAVKTSVEDTKNAHFQHCFTKSEDGYLY	-----	-----	-----
SEQ ID NO: 17	-----	-----	-----	-----
SEQ ID NO: 56	-----	-----	-----	-----

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Figure 3D

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Figure 3E

SEQ ID NO: 20	++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++	RSAGAYGFVMSSNYNTRGRAAEVLVDGQQT-HEVRRRETVEE---	LYAGESLLPQ	*
SEQ ID NO: 57		HDAGAYCMSMASTYNLKMRRPPEYWVEEDGSIKIRHAETFDHRLRFFEG---	L---	
SEQ ID NO: 9		HDAGAYCMSMASTYNLKLRRPPEYWVEADGSIKIRHGEKLDYMKFFDG---	LPA	
SEQ ID NO: 11		HDAGAYCMSMASTYNLKLRRPPEYWVEEDGSIKIRHEEKLDYMKFFDG---	LPA	
SEQ ID NO: 13		HDAGAYCMSMASTYNLKLRRPPEYWVEDDGSIAKIRRGESFDDYMKFFDN---	LSA	
SEQ ID NO: 15		HDAGAYCMSMASTYNLKMRRPPEYWVEDDGSVSKIRHGETFEDHIRFFEG---	L---	
SEQ ID NO: 19		-----	-----	
SEQ ID NO: 54		HDAGAYCMSMASTYNLKMRRPPEYWVEDDGSVSKIRHGETFEDHIRFFEG---	L---	
SEQ ID NO: 17		-----	-----	
SEQ ID NO: 56		HDAGAYCMSMASTYNLKMRRPAEYWVEDDGSIVKIRHGETFDDYMKFFDG---	LPA	

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SEQ	ID	NO: 60	MA-SLCFQSPSKPISYFQPKSNPSPPLFAKVSVFCRASVQTLVAVEPEPVFVSVKTFAP	*
SEQ	ID	NO: 29	M-----REIMKVRVKA--P	
SEQ	ID	NO: 22	-----	
SEQ	ID	NO: 24	-----	
SEQ	ID	NO: 59	-----	
SEQ	ID	NO: 26	MATSTCFLCPSTA-----SLKGRARF-RIRI-RCSSSVVNIRREPEPVTTLVKAFAP	
SEQ	ID	NO: 28	-----	
			1	60

SEQ	ID NO:60	+**+***++**+++*+ ++++++ + +++++ + **+ *+ + + + *
SEQ	ID NO:29	ATVANLGPGFDFLG-CAVDGLGDHVTLRVDPSPVRAGEVSI SEITG-TTTLKLSNPLRNCA
SEQ	ID NO:22	CTSANLGVGFDVFGLC---LKEPYDVIEVEAIDDK EII-EVDD--KNIPTDPDKNVA
SEQ	ID NO:24	-----
SEQ	ID NO:59	-----
SEQ	ID NO:26	-----H
SEQ	ID NO:28	ATVANLGPGFDFLG-CAVDGLGDIVSVKVDPQVHPGEICISDISGHAPNKLSKNPLWNCA

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FIGURE 5A

Figure 5A

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SEQ ID NO:66 M--ASFNNPLTSLCNTKSERNNLFKISL-----YEAQSLGFSKLNLSRKVAFPS
SEQ ID NO:32 M--AD-----AKST-----
SEQ ID NO:65 M--ASLVNNAYAAIRTSKLE-----LREVKNLNANFR
SEQ ID NO:62 -----MASWSSPSAANAASGARFGFPSPGGQRLAPCPSLVRGT
SEQ ID NO:64 ARGSNYGTTPLSNTSESEQRKMASWSSPVAA--AALQVHFGSSCFFSAR--SPRQTLLLLPP
SEQ ID NO:31 M--AV-----ERSG-----
1 60

***** ** *** **
VVCKAV-----SVPTKSS-----TEIEGLNIAEDVTQLIGNTPM
-----IAKDVTTELIGNTP
VGPPSSLS-----CNNFKKVSSSPIT--CKAVSLPSPSTIEGLNIAEDVSQIGKTPM
PAPTLVLRHLHPDGRGHLLAHTGPSRSS--CRAVA---AEVGGLNIANDVTQLIGNTPM
LARNPTLTIQP--RPHPRNINSSSSSWMCHAVA---AEVEGLNIADDVTQLIGKTPM
-----IAKDVTTELIGKTP
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***** ** *** **
VYLNNTIAKGCVANIAAKLEIMEPCCSVKDRIGFSMIVDAEEKGLISPGKTVLVEPTSGNT
VYLNRVVDGCVARVAAKLEMMPCSSVKDRIGYSMISDAENKGLITPGESVLIPTSGNT
VYLNNVSKGSVANIAAKLESMPCCSVKDRIGYSMIDDAEQKVITPGKTTLVEPTSGNT
VYLNNVVKGSVANVAAKLEIMEPCCSVKDRIGYSMINDAEQGLITPGKSVLVEATSGNT
VYLNNI VKGCVANVAAKLEIMEPCCSVKDRIGYSMISDAEEKGLITPGKSVLVEPTSGNT
VYLNKLADGCVARVAAKLELMEPCSSVKDRIGYSMIADAEEKGLITPGKSVLIEPTSGNT
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Figure 5C

SEQ	ID	NO:	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
SEQ	ID	NO: 66	ALQEGLLVGISSGAAALAAIQVKR	PENAGKLI	GVFP	SYGER	YLSSIL	FQSI	REECE	KM																											
SEQ	ID	NO: 32	ALKEGLLVGISSGAAAAAARI	AKR	PENAGKLI	VAVFP	SFGERY	LVSTVL	FESVK	RETEN																											
SEQ	ID	NO: 65	AMKEGLLVGISSGAAAAAAVR	IGKR	PENAGKLI	AVVFP	SFGERY	LVSSIL	FQSI	REECE	NM																										
SEQ	ID	NO: 62	AVQEGLLVGISSGAAAAAAAI	KVAKR	PENAGKLI	VVVP	SFGERY	LVSSVL	YQSI	REECE	NM																										
SEQ	ID	NO: 64	ALQEGLLVGISSGAAAAAAAI	KVAKR	PENAGKLI	VVVP	SFGERY	LVSSIL	FQSI	REECE	KL																										
SEQ	ID	NO: 31	ALKEGLFVGISSGAAAAAAAF	QIAKR	PENAGKLI	VAVFP	SFGERY	LVSSVL	FESVR	REAES	M																										

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SEQ	ID	NO:66	KPEL
SEQ	ID	NO:32	VFEP
SEQ	ID	NO:65	KPE-
SEQ	ID	NO:62	QPEP
SEQ	ID	NO:64	QPEP
SEQ	ID	NO:31	TFEP

Figure 6A

SEQ	ID	NO:	41	MTSSLHSS-----FVPFADLSDRGLISKNSPTSVISKVPTWEKKQISNR-N	
SEQ	ID	NO:	34	-----	
SEQ	ID	NO:	68	M-----AVVPNAPGRLLQSTFPN-PSSASAARAQSF-RVPP-LRLSLFRRMA	
SEQ	ID	NO:	36	-----	
SEQ	ID	NO:	70	MSAAAAAAAIPTSLGRLFHLRPTPN--PSRNLSGSSAQPLLRLSYHPRLTLRRME	
SEQ	ID	NO:	38	MFSSAISQKPFQLSLVIDR-YAQSTTAATRWEC LGFNKSENFSTKRVL-----RAE	
SEQ	ID	NO:	40	-----	
SEQ	ID	NO:	72	M-----AAA---AATRLFLHSSPPSSLPCPNPSSAHTP-RPAY-PRLALAHRMA	
				1	60

SEQ	ID	NO:	41	SFKLNCVMEKSVDGQTHSTVNNTT-DSLNTMNIKE-----EASVSTLLVNLNDNKFDPF	
SEQ	ID	NO:	34	-----	
SEQ	ID	NO:	68	GRSLTVIAGASGGERDLSASAVSVEALDSVSDSD-LETKEPSVSTMLTSFENSFDKYG	
SEQ	ID	NO:	36	-----	
SEQ	ID	NO:	70	AP--AAIADSHGGG--DLSASAVGAELGAVAAPDFVEMKEPSVATILTSFENSFDGFG	
SEQ	ID	NO:	38	GFKLNLVE-----NREMEVESSSLVDDAAMSLSEEDLGEPSISTVMNMFESKFDPF	
SEQ	ID	NO:	40	-----HESVATILTSFENSFDKYG	
SEQ	ID	NO:	72	AAP-AAIAGPSGDSERDLSASAVSLEALGAVESGGLERKEPSVATILTSFENSFDKYG	
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Figure 6C

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